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Application No. 10/696,814

JAN 18 2007

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Original) A computerized method for identifying peaks corresponding to glycans from a mass spectrum, comprising:

receiving not less than one glycan spectrum from a mass spectrometer, wherein said not less than one glycan spectrum includes peaks having a measured mass;

assigning glycan identifications to said peaks; and reporting said peak assignments.

- 2. (Original) The method for identifying peaks corresponding to glycans according to claim 1, further comprising constructing a monosaccharide set table having a plurality of isomers corresponding to glycans.
- 3. (Original) The method for identifying peaks corresponding to glycans according to claim 2, wherein constructing said monosaccharide set table comprises:

constructing a glycan/monosaccharide set chart, wherein each row represents a set of monosaccharides;

applying combination ranges for said monosaccharides;

developing a rule set, wherein said rules specify monosaccharide combination limitations;

eliminating each of said monosaccharide rows not satisfying said rule set; and computing glycan isomer mass and glycan isotope frequency.

4. (Original) The method for identifying peaks corresponding to glycans according to claim 1, wherein assigning glycan identifications comprises:

calibrating said received glycan spectrum; and

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matching isotopes from said monosaccharide set table to said peaks within said glycan spectrum.

- 5. (Original) The method for identifying peaks corresponding to glycans according to claim 4, wherein calibrating said received glycan spectrum comprises setting said calibration explicitly.
- 6. (Original) The method for identifying peaks corresponding to glycans according to claim 4, wherein matching isotopes comprises: selecting the isotope with the highest expected frequency for each said monosaccharide; searching said spectrum for a peak within an acceptable tolerance of said isotope; and selecting said peak having the best isotope envelope.
- 7. (Original) The method for identifying peaks corresponding to glycans according to claim 4, further comprising performing a quality assessment, wherein said quality assessment determines the likelihood that said peak assignment is correct.
- 8. (Original) The method for identifying peaks corresponding to glycans according to claim 7, wherein performing said quality assessment comprises:

measuring proximity of said measured mass of a selected peak to the theoretical mass of the glycan;

computing said isotope envelopes; and examining the peak height at a peak height mass minus one position.

- 9. (Original) The method for identifying peaks corresponding to glycans according to claim 4, further comprising performing spectrum combination, wherein said spectrum combination includes combining the information from a plurality of spectra.
- 10. (Original) The method for identifying peaks corresponding to glycans according to claim 1, wherein said reporting of said peak assignments comprises not less than

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one family report, wherein said family comprises a sequence of spectrum peaks, wherein the label for each succeeding peak contains not less than one more monosaccharide than the label of the preceding peak.

- 11. (Original) The method for identifying peaks corresponding to glycans according to claim 1, wherein said glycan identifications comprise a plurality of cartoons, wherein said cartoons comprise symbolic representations of said rows from said monosaccharide table.
 - 12. (Canceled).
 - 13. (Canceled).
 - 14. (Canceled).
 - 15. (Canceled).
 - 16. (Canceled).
 - 17. (Canceled).
 - 18. (Canceled).
 - 19. (Canceled).
 - 20. (Canceled).
- 21. (Original) An article of manufacture comprising a computer usable medium having computer readable program code embodied in said medium which, when said program

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code is executed by said computer causes said computer to perform method steps for identifying peaks corresponding to glycans from a mass spectrum, comprising:

receiving not less than one glycan spectrum from a mass spectrometer, wherein said not less than one glycan spectrum includes peaks having a measured mass;

assigning glycan identifications to said peaks; and reporting said peak assignments.